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QUANTUM-HOLOGRAPHIC BASES OF PSYCHOSOMATICS & SPIRITUALITY: CONTRIBUTION TO COMPARATIVE EXPLORATION OF SCIENCE & RELIGION

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Abstract. We hereby focus on the quantum-holographic bases of psychosomatics and spirituality. This is of special importance due to the widespread use of integrative medicine in developed countries – as contemporary research of psychosomatic diseases suggests necessity of holistic methods (focusing on the body's acupuncture system and consciousness), oriented to treating man as a whole and not of disease as a symptom of disordered whole, implying their macroscopic quantum origin – with significant global psychosomatic implications of the necessity of including three front lines of integrative psychosomatic medicine. The aforementioned studies are in line with re-awakened interest in the scientific study of consciousness in recent decades (with indications of appearance of the grand synthesis of the two modes of knowledge, indirectly-rational and directly-mystical, in the framework of a quantum-holographic paradigm) – where the role of each individual becomes indispensable due to the influence and care for collective mental environment, which is fundamental question of mental hygiene and civic decency, or spiritual and civic morality. It should be noted that three essential aspects of any comparative study of science and religion are hereby included: utilitarianism and / or limitations of psychosomatic transpersonal practices of tribal traditions, meditation practices of the East, and prayer practices of the West, in healing or salvation of souls; epistemology of the two modes of knowledge, indirectly-rational and directly-mystical; and phenomenology of transpersonal-mystical, near-death, out-of-body, and extrasensory states of consciousness.

Keywords: psychosomatics & spirituality, quantum-informational medicine: acupuncture-based & consciousness-based integrative medicine, quantum-holographic informatics: two modes of knowledge, comparative exploration of science & religion.

1. Introduction

Despite the involved huge financial and intellectual resources in biomedical research and health care, human health is still jeopardized by numerous *psychosomatic diseases*, which find the fertile soil in modern man exposed to everyday *stress*. Since modern partial methods have not shown the desired efficacy in the prevention / treatment of psychosomatic disorders, new approaches are needed, which will include methods of *integrative biophysics*, oriented to *holistic healing the person as a whole* rather than disease as a symptom of disorder whole, implying their deeper *quantum-holographic origin*. In the *focus* of these *holistic methods* are *acupuncture system and consciousness*, closely related within the *quantum-informational medicine*, with biomedical ideal of *holistic prevention and control / preserving health* at all levels (*environment / body / systems of organs / organs / tissues / cells*) [1-15].

The aforementioned studies are in line with re-awakened interest in fundamental scientific research of *consciousness* in past decades [1-110], indicating the occurrence of

grand synthesis of two modes of knowledge, indirect-rational and direct-mystical, within the framework of extended holistic quantum-holographic paradigm — where the role of each individual becomes indispensable due to the influence and care for collective mental environment [1-22]. And can help us realize that all our partial rationalizations are still only approximations of fundamentally-holistic reality, and that all the divisions that separate us harmlessly at first and then spontaneously give birth to big conflicts — are tragic misunderstanding of spiritually immature (historical) epoch of civilization [107-109].

In this context, in the following all *three essential aspects* that must be within the focus of any *comparative* study of science and religion, will be included: the *utility* of transpersonal spiritual practices in the healing or the salvation of souls; *epistemology* of mystical and rational modes of consciousness; and *phenomenology* of transpersonal spiritual experiences.

2. Quantum-holographic bases of psychosomatics

The prevailing scientific paradigm considers information processing within the central nervous system as occurring through *hierarchically organized and interconnected neural networks* [7,12,13,110-113], it seems that this hierarchy of biological neural networks down to the subcellular *cytoskeleton* level, which some researchers believe that the interface between the *neural* and *quantum* levels [23,24] – and which recently turned out that the Feynman propagator version of quantum mechanics *mathematical formalism analogous to Hopfield neural network*, which represents the basis of *quantum neural holography* [8-13,110] (which allows successive reconstruction of the wave functions of the memory states at the output of quantum-holographic Hopfield neural network (complete, of both amplitude and phase) in recognition of the wave function of the previously memorised state displayed again at its entrance (which is the basis of every holography, but everything here is simpler than in the standard laser holography, which requires so called coherent reference and subject laser beams).

Mentioned analogy opens additional *fundamental question* of how *classical* parallel processing level is resulting from *quantum* parallel processing level, which is a general problem of relationship between quantum and classical levels in the *quantum theory* of decoherence [8-13,114,115].

The same question is closely related to the fundamental nature of *consciousness*, whose indeterministic properties of *free will* [7,8,10-17,25,26] and other holistic manifestations like conscious-unconscious transition and consciousness pervading body [27,28], *transitional states of consciousness* [7,8,10-17] and *altered states of consciousness* [7,8,10-17,29-31] – necessarily imply that some manifestations of *consciousness* must have deeper *quantum origin*, with significant *psychosomatic implications*.

Namely, according to the *quantum-coherent characteristics* of the Russian-Ukrainian school of *microwave resonance therapy* (MRT) [116-122] (highly resonant microwave sensory response of the disordered organism, biologically effective nontermal microwave radiation of extremely low intensity and energy, and neglecting microwave energy losses down acupuncture meridians), *acupuncture system* is the only *macroscopic quantum system* in our body (while brain still seems not to be [31]) – which today is the basis of *quantum-informational* medicine [7,10-13,120-134].

And as recent theoretical research has shown that any quantum system has a formal mathematical structure of associative quantum-holographic Hopfield-like neural network [110] – so the memory attractors of the acupuncture network can be treated as psychosomatic disorders representing electromagnetic microwave (EM MW) quantum-holistic record (which can thus be deleted only holistically, as indicated by extremely high efficiency of MRT-therapy [6,7,10-13,116-122], that removes the very local information about psychosomatic

disorders) – which can be the basis of (acupuncture-based temporarily reprogrammable) quantum-holistic local psychosomatics [6-8,10-15,17], cf. Fig. 1. Namely, according to the Tibetan traditional medicine [67] acupuncture procedure must be repeated every few months – probably as a result of renewed patient's mental loads from his mental transpersonal environment, that remained non-reprogrammed at the level of quantum-holographic collective consciousness, which is supported by Tibetan pulse diagnostics based on 20 pulses, that allows accurate diagnosis of psychosomatic disorders not only of patients but also of their family members and enemies).

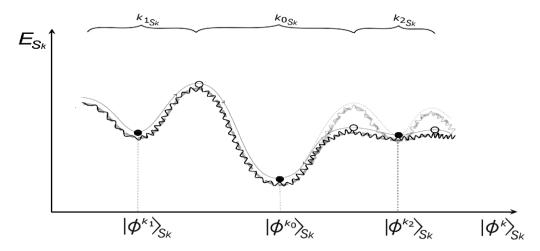


Figure 1. Schematic presentation of the adaptation of memory attractors in the energy-state space $(E_{S_k}(\phi^k))$ of quantum-holographic memory of various hierarchical levels of biological macroscopic open quantum system S_k (local cellular enzyme / substrate, local bodily acupuncture system / consciousness, nonlocal out-of-body consciousness / collective consciousness). It should be noted that Nature presumably has chosen elegant roomtemperature solution for biological quantum-holographic information processing, constantly fluctuating between quantum-coherent states and classically-reduced states of various hierarchical levels of biological macroscopic open quantum system S_k , via nonstationary interactions with out-of-body farther environment and further through decoherence by bodily closer environment - and thus a quantum neural holography combined with quantum decoherence could be very important element of quantum-holographic feedback bioinformatics, from the level of cell – via the level of the body – to the level of collective consciousness, with backward dynamic influence on the expression of genes. In the context of quantum-informational therapies, their goal would be bioresonant excitation of the treated psychosomatically disoredered state (acupuncture palpatory-painful or psychologically traumatic, as one of hundreds possible disordered states), thus enabling that its initial memory attractor ϕ^{k_2} (dotted line) is bioresonantly excited (similar to annealing procedure in artificial neural networks) becoming more shallower and wider (full line) at the expense of deepening of the (energy-dominating) attractor of healthy (acupuncture palpatory painless or psychologically traumatic-free) state ϕ^{k_0} – with successive larger overlapping and final integration of the two states. Thus, all these acupuncture-based and consciousness-based holistic approaches and techniques might be considered as quantum-informational therapies, via imposing new healing boundary conditions in the energy-state space of the acupuncture system / (individual & collective) consciousness – implying necessity of quantum-informational successive bioresonant balansing of all unwilling side memory attractors (like ϕ^{k_2} above), which would otherwise cause development of psychosomatic diseases on the individual level, and interpersonal fights in this and further generations on the collective level.

That acupuncture system is closely associated with consciousness and psychosomatics, is also supported by new meridian (psycho / energy) therapies (with rapid removal of traumas, phobias, allergies, post-traumatic stress and other psychosomatic disorders [104,105]), where the simultaneous effects of visualization and tapping / touching acupuncture points could theoretically be interpreted as "smearing" of memory attractors of the psychosomatic disorders, via successive setting of new boundary conditions in the energy-state space of the acupuncture system during intense visualizations of psychosomatic problems [7,10-17] — which could also be classified in the field of quantum-informational medicine [7,10-14], cf. Fig. 1. Bearing also in mind the possibility and effectiveness of transpersonal circular meridian (psycho / energy) therapeutic processes, i.e. from all relevant mentally-addressed meta-positions of other persons who participate in the treated trauma [105], this implies that these interactions are of the quantum-gravitational nature in the highly-noninertial transitional states of consciousness of trauma-related persons [6-8,10-15,17].

At the same time, the above mentioned analogy between mathematical formalisms of Hopfield associative neural network and Feynman propagator version of quantum mechanics implies that collective consciousness is possible ontological property of the all-pervading unified physical field [6-8,10-17] with various microquantum and macroquantum (both non-biological and biological) excitations, which is widely spread thesis of Eastern esoteric / religious traditions [31,50]. Then memory attractors of quantum-holographic spatial-temporal network of collective consciousness can be treated as psychosomatic collective disorders representing a generalized EM quantum field-related records (including interpersonal prayer-finally-reprogrammable loads [6-8,10-15,17,96]) – which can be the basis of quantum-holistic global psychosomatics [6-8,10-15,17] – with significant religious / social implications of the necessity of transpersonal spiritually-mediated quantum-holographic balancing of all unwilling side memory attractors, cf. Fig. 1.

The similar could refer to a *lower hierarchical quantum-holographic macroscopic open* quantum cellular enzyme-genomic level, which could operate at the level of continuous quantum-conformational quantum-holographic-like molecular recognition. As a result, due to quantum-holographic backward influence of the EM quantum field of acupuncture system on the cellular enzyme-genomic level (so called macroscopic "downward causation", and not just a microscopic "upward causation"), quantum neural holography combined with quantum decoherence could be very significant element of the feedback bioinformatics, from the level of cell – via the level of the body – to the level of collective consciousness [6-8,10-17], cf. Fig. 1 (which may be associated with similar ideas of general systems theory applied to biological systems, with the well-known open problem of the "emergent control" of higher hierarchical levels over the lower levels in cognitive sciences [77,78]).

3. Quantum-holographic bases of spirituality

Mentioned *quantum-holographic picture* implies that quantum-holographic hierarchical parts carry information about the whole (which resembles the Hindu relationship *Brahman / Atman*, as a whole and the part which contains information about the whole [31,58,59], allowing subtle *quantum-informational coupling of various hierarchical levels* in Nature [79-82], which is supported by *acupuncture system and its projection zones* (ECIWO holographic concept [83]) and the discovery of *quantum-holographic influence of verbal communication on the expression of cell genome* (by voice-modulation of irradiating-laser beams [84]), as well as the *origin of the amazing creativities* (Tesla and Mozart as "case studies" [85,86]) and *predestinated life paths and temptations* (as indicated by the contemporary experiences of hypnoregressions [87] sa well as experiences of tribal traditions [88-92] and traditions of East

[93-95] and West [96-98], while still emphasizing that it is *possible to optimize them by spiritual purification* [87-103])).

In this context, despite the deterministic evolution of the quantum-holographic Hopfield-like neural network of collective consciousness (as there is no out-of-cosmic environment that triggers the non-unitary collapse of the quantum-coherent state of the field-related cosmic collective consciousness and complementary 'particle' cosmic environment) [7,10-17], the memory attractors of the collective consciousness could still be reprogrammed by merciful prayer for others by eliminating inter-personal loads of collective consciousness – probably via the spiritually-excited macro-quantum portions of vital energy (similarly to mental-channeled Ayurvedic, Qigong and Reiki experiences of local and transpersonal healings [61,62,69]) in the prayer-related persons, as indeterministic intervention in the quantum-holographic evolution of collective consciousness (and complementary incoming individual and collective events), thus (non-unitary) setting necessary new boundary conditions [7,10-17]. That leaves the most room for free will and influence on future preferences – implying that role of each individual becomes indispensable due to the influence and care for collective mental environment.

Bearing also in mind the possibility and effectiveness of transpersonal circular meridian (psycho / energy) therapeutic processes, i.e. from all relevant mentally-addressed metapositions of other persons who participate in the treated trauma [105], this implies that all these interactions of the trauma-related persons are of the quantum-gravitational nature, via miniature "wormhole" space-time tunnels (generated in accordance with very general Einstein's *Principle of equivalence* of inertial and gravitational accelerations [134]) in the highly-noninertial transitional states of consciousness of trauma-related persons [6-8,10-15,17] (i.e. "silver cords" of vital energy, extrasensory observable in altered states of consciousness between heart, stomach or the throat chakras of the related persons; in Afro-Haitian voodoo tradition the "silver cord" between the operator and the victim is deliberately created by visualization, while in the Hawaiian ho'oponopono tradition the "silver cord" is cut by visualization in order to remove the traumatic emotional connection – which otherwise naturally exists between mother and child, and is spontaneously formed by intense exchange of vital energy among relatives, close associates, current and former lovers, friends and enemies, whereby it can also survive post mortem between the living and the deceased [7,10-15]). Thus, our theoretical considerations suggest the real nature of transpersonal experiences of various spiritual traditions [29,30,32,46,58-60,66-69,96], substantiated by accumulated phenomenological evidences and laboratory and clinical studies [3,4,22,33-37,42-45,47-57,63-65,70-76,82,84-95,97-103,105,123,134], and even *practically incorporated* in contemporary acupuncture-based and consciousness-based holistic approaches and techniques of quantuminformational medicine [7,10-14,69-76,89-106,120-134].

In this context, association of individual consciousness with manifestly-macroscopic-quantum acupuncture system, by applying the methods of associative neural networks, quantum neural holography, and quantum decoherence theory, suggests two modes of knowledge, according to the coupling strength consciousness-body-environment [10-17]: weakly-coupled quantum-coherent direct mode (in the out-of-body spiritual / creative transitional and altered states of consciousness, like prayer, meditation, daydreams, lucid dreams...), and strongly-coupled classically-reduced indirect mode (in bodily perceptively / rationally mediated normal states of consciousness, like sensory perception, logic and scientific reasoning...) – with conditions of mutual transformation. This explains the generally poor informational rationalization of direct quantum-holographic spiritual / religious mystical experience (as the problem of quantum theory of measurement, related to the reduction of the implicate order of the quantum-coherent (quantum-holographic) superposition of states into the explicate order of measuring classically-reduced states [10-17]) – which is close to the

experiences of numerous *shamanistic tribal traditions*, who believe that the *genuine* (quantum-holographic) reality is represented by *dreams* [57], and that (classically-reduced) waking state is lie / illusion (*maya*, as stated in the *traditions of the East* [32,58,59]).

In addition, the necessity of direct quantum-holographic coupling of individual and cosmic collective consciousness in an observation of the implicate order needs weak out-of-body quantum-communication coupling consciousness-environment, i.e. previous reprogramming of all psychosomatic loads (cleansing of the possessive or hedonistic emotional-mental sinful / karmic connections with world — which as loading "mental addresses" would give rise to quantum projections of mentally-channelled tunnelled consciousness upon the out-of-body environment, and thus to classically-reduced out-of-body extrasensory observing of the mentally-addressed environment) — and in this context the efforts of mystics of all traditions to purify consciousness / soul via spiritual practice (prayer, meditation...) and thus to reach their final eschatological goal (Kingdom of God, nirvana...), i.e. post-mortem salvation of soul (non-bounded sin-free / karmic-free) by re-union (re-ligare / yoga) with the supreme God [32,58,96] appear reasonable.

It still *leaves room for personal love*, whose highest manifestation is ability and readiness *for permanent and unconditioned forgiving* (to loving person, and because of him / her to everybody else, including enemies), in prayer and (subtly related quantum-holographic) living practice; the same refers to love for relatives and friends [6,7,10-15].

4. Discussions and conclusions

From rational-empirical viewpoint, this paper includes all *three essential aspects* that must be in the focus of any *comparative study* of science and religion: (A) *utility* and / or limitations of psychosomatic transpersonal practices of tribal traditions, meditation practices of the East, and prayer practices of the West, in healing or the salvation of souls; (B) *epistemology* of two modes of consciousness, direct-mystical and indirect-rational; and (C) *phenomenology* of transpersonal-mystical, near-death, out-of-body, and extrasensory states of consciousness.

(A) Our quantum-holographic framework of psyshosomatics and religion provides better understanding of the nature of psychosomatic diseases as well as limitations of their prevention and healing methods, which might help in developing strategies for psychosomatic integrative medicine in the 21st century, with all holistic acupuncture-based and consciousness-based approaches and techniques treated as quantum-informational therapies, by imposing new healing boundary conditions in the energy-state space of EM quantum-field-related acupuncture system / (individual and collective) consciousness – suggesting that there are three front lines of psychosomatic integrative medicine [7,10-14,18]: (i) spirituality and circular (psycho / energy) therapies from all relevant meta-positions, with the possibility of a potential permanent removal of mutual memory attractors on the level of collective consciousness, (ii) (quantum) holistic medicine and non-circular (psycho / energy) therapies, which temporarily remove the memory attractors on the level of the acupuncture system / individual consciousness and prevent or alleviate their somatization, as a result of negligence on the first level, (iii) symptomatic conventional medicine, which via immunology, pharmacology, biomedical diagnostics and surgery at the physical level prevents or alleviates somatic consequences of carelessness on the first two levels.

It should be noted that the *necessary activities* in the second and third levels, with *neglect of the first level*, would result in *further transfer of memory attractors* on the level of individual and collective consciousness in this and future generations, thus *accumulating quantum-holographic nonlocal loads* that cause then not only diseases but also interpersonal conflicts, wars and other sufferings. Thus civilization, via *synthesis* of scientific knowledge in

the field of *consciousness* and millennia experiences of the *spiritual traditions*, could contribute that new millennium would be characterized by *wisdom* [14,21,107-109]. Decisive role in this process could play all *religious communities*, *cultivating* a true *spiritual moral* and absolute (not declarative, as so far in history) inter-personal, inter-ethnic and inter-religious *tolerance*, as a measure of individual behavior from the *perspective of death*, i.e. amount of generated and non-reprogrammed psychosomatic conflicts until death, which determines the *spiritual evolution* of the soul of the deceased as well as the *preferences* of the individual and / or collective future of the descendants – that can be *significantly altered* only via *collective prayer* for our neighbors and enemies, and consequently *global reprogramming of collective consciousness*.

(B) Our quantum-holographic framework of psyshosomatics and religion also provides better understanding of the *two modes of knowledge*, according to the coupling strength mind-body-environment [10-17]: (i) *weakly-coupled* quantum-coherent *spiritual / creative direct mode* (in altered and transitional states of consciousness), and (ii) *strongly-coupled* classically-reduced *perceptual / rational indirect mode* (in normal states of consciousness) – and *conditions of mutual transformation*, with significant epistemological / spiritual implications. This explains the *generally poor informational rationalization* of direct quantum-holographic spiritual / religious *mystical experience* (as the problem of quantum theory of measurement, related to the reduction of the implicate order of the quantum-coherent (quantum-holographic) superposition of states into the explicate order of measuring classically-reduced states [10-17]). And can help us realize that all our *partial rationalizations* (classically-reduced mappings!) are still only an approximation of *fundamental holistic reality* (quantum-holographic territory!) – and that all *divisions are tragic misunderstanding* of spiritually immature (historical) epoch of civilization (because, map is not the territory!) [14,21,107-109].

So science is closing the circle, by re-discovering two different modes of knowledge and at the same time setting its own epistemological limitations — as it was preserved for millennia in shamanistic tribal traditions [88-92], or as it was concisely described by Patanjali in Yoga Sutras more than two millennia ago [58,59], pointing out that mystical experience (samadhi) is "filled with truth" and that it is "above inference and the scriptures", or as this difference between faith and cognition was formulated at the beginning of the last century by Berdyaev in Philosophy of Freedom as the difference of two modes of knowledge [36], prayer-mediated "comprehension of the affairs invisible" and rationally-mediated "comprehension of the affairs visible"! This is in line with scientific re-awakened interest in the phenomenon of consciousness, with indications of the appearance of the grand synthesis of two modes of knowledge — where the role of each individual becomes indispensable due to the influence and care for collective mental environment, which is a fundamental issue of both spiritual and civil morality [14,21,107-109].

(C) Our quantum-holographic framework of psyshosomatics and religion also suggest the *real nature of transpersonal experiences* of various spiritual traditions [29,30,32,46,58-60,66-69,96], substantiated by *accumulated phenomenological evidences* and *laboratory and clinical studies* [3,4,22,33-37,42-45,47-57,63-65,70-76,82,84-95,97-103,105,123,134], and even *practically incorporated* in contemporary acupuncture-based & consciousness-based *quantum-informational medicine* [7,10-14,69-76,89-106,120-134]. In these lines, *transpersonal experiences could be of quantum-gravitational nature* in space-time transcending highlynoninertial *transitional states of consciousness* [8,10-15,17] (from high-dielectric bodily into low-dielectric out-of-body states!) *locally equivalent-to-strong-gravitation* (according to very general Einstein's *Principle of equivalence* of inertial and gravitational accelerations!) manifested by *locally generated "wormhole" space-time tunnels* (stabilized by so called *exotic matter* (vacuum fluctuations in strongly curved space-time of "wormhole" tunnels [135]) with

anti-gravity effects (indeed observed in transpersonal psychokinetic manifestations of vital energy [11,42,58-60,82,93,94,134]!)).

Then transpersonally-extended esoteric concepts of various spiritual traditions of East and West could be biophysically accounted within our plausibly generalized quantumholographic / quantum-gravitational framework [8,10-15,17]: (i) astral body (manomaya, lingasarira, manovijnana, ka, psyche, nephesh, nafs, subtle body, psychic body, soul...) [32,58,67,96] vs. ionic component of the out-of-body displaceable EM-ionic macro-quantum acupuncture system (connected with the body by miniature 'wormhole' space-time tunnel, generated in the highly-noninertial transitional states of consciousness, as frequently observed in extrasensory near-death experiences) [6-8,10-15,17]; (ii) mental body (vijnanamaya, suksmasarira, manas, ba, thymos, ruach, ruh, noetic body, spiritual body, mind...) [32,58,67,96] vs. EM component of the out-of-body displaceable EM-ionic macroquantum acupuncture system (embedded within ionic component of the out-of-body displaceable EM-ionic macro-quantum acupuncture system) [6-8,10-15,17]; (iii) distributed centers of consciousness (chakras, acupuncture points, sephiroths, holy discs...) [32,58,67,68,96] vs. EM-ionic condensations in the structured out-of-body displaceable EMionic macro-quantum acupuncture system [6-8,10-15,17]; (iv) vital energy (chi / qi / ki, prana / akasha, mana, ka, pneuma / ether / natura medica / anima mundi, yesod, baraka, the Holy Spirit / Uncreated Light, bioenergy / biofield...) [32,58,67,68,96] vs. EM-ionic macroquantum condensates (unstructured / structured, virtual / real [28]) within acupuncture channels (with possible generalization from the EM field to the unified field, in line with the broader traditional meaning of vital energy, as all-pervasive cosmic quintessence) [6-8,10-15,17]. Additionally, if put in the theoretical context of the holographic principle [135,136], according to which any 3D physical system is isomorphic to the holographic information embedded on its 2D surface, then the quantum-holographic informational content of a body could also be contained in the corresponding surface layer of vital energy of the astral-mental body (aura), as has been stated in various traditions of East and West [32,58,67,68].

To conclude, everything considered and discussed above indicates the *full significance of holistic education and behavior* – demonstrating ultimate necessity of *redefining the global educational / informational / political goals*, with the shift towards *holistic gentle actions for global solutions of the world risk society* [107-109].

References

- 1. V. Stambolović (ed.), *Alternative Approaches to Health Improvement* (ALCD, Belgrade, 2003), in Serbian.
- 2. http://www.imconsortium.org/prod/groups/ahc/@pub/@ahc/@cahcim/documents/asset/ahc_asset_391689.pdf; official website of the Consortium of Academic Medical Centers for Integrative Medicine, founded by the end of 1990s, which includes over 50 highly esteemed US academic health centers and affiliate institutions, in order to transform medicine and healthcare through rigorous scientific studies, new models of clinical care, and innovative educational programs that integrate biomedicine, the complexity of human beings, the intrinsic nature of healing, and the rich diversity of therapeutic systems.
- 3. http://www.atpweb.org; official website of The Association for Transpersonal Psychology (ATP), concerned from early 1970ies with the study of humanity's highest potential, and with the recognition, understanding, and realization of unitive, spiritual, and transcendent states of consciousness (making transpersonal psychology the fourth force in psychology, alongside with psychoanalysis, behaviorism, and humanistic psychology, after one of its founders, A. Maslow).

- 4. http://www.issseem.org; official website of The International Society for the Study of Subtle Energies and Energy Medicine (ISSSEEM), founded by the end of 1980s.
- 5. M. Bischof, Introduction to integrative biophysics, in: F- A. Popp, L. V. Beloussov (eds.), *Integrative Biophysics* (Kluwer, Dordrecht, 2003).
- 6. Group of authors, Anti-Stress Holistic Handbook, with Fundamentals of Acupuncture, Microwave Resonance Therapy, Relaxation Massage, Airoionotherapy, Autogenic Training, and Consciousnes (IASC, Belgrade, 1999), in Serbian.
- 7. D. Raković, A. Škokljev, D. Djordjević, *Introduction to Quantum-Informational Medicine, with Basics of Quantum-Holographic Psychosomatics, Acupuncturology and Reflextherapy* (ECPD, Belgrade, 2009), in Serbian.
- 8. D. Raković, M. Dugić, M. M. Ćirković, Macroscopic quantum effects in biophysics and consciousness, *NeuroQuantology* 2(4) (2004) 237-262.
- 9. D. Raković, M. Dugić, M. Plavšić, G. Keković, I. Cosic, D. Davidović, Quantum decoherence and quantum-holographic information processes: From biomolecules to biosystems, *Mater. Sci. Forum* 518 (2006) 485-490.
- 10. D. Raković, Quantum-holographic framework for consciousness and acupuncture: Psychosomatic-cognitive implications, *Medical Data Rev.* 3(3) (2011) 303-313, Invited paper; Reprinted in: D. Karabeg, D. Raković, S. Arandjelović, M. Mićović (eds.), *Proc. QIM 2011 Round Table Knowledge Federation* (QUANTTES & HF & DRF, Belgrade, 2011).
- 11. http://www.dejanrakovicfund.org; website of Dejan Raković Fund (DRF) for Promoting Holistic Research and Ecology of Consciousness, with available relevant author's books, proceedings, papers, communications, and links to recommended websites.
- 12. D. Raković, *Integrative Biophysics, Quantum Medicine, and Quantum-Holographic Informatics: Psychosomatic-Cognitive Implications* (IASC & IEPSP, Belgrade, 2009).
- 13. D. Raković, *Fundamentals of Biophysics*, 3rd ed. (IASC & IEFPG, Belgrade, 2008), in Serbian.
- 14. D. Raković, Recollections, Dreams, Thoughts: About Past and Future 1984-2008. On Crossway of Quantum-Holographic and Classically-Reduced Reality (IASC & IEFPG, Belgrade, 2008), in Serbian.
- 15. D. Raković, Quantum-coherent and classically-reduced modes of consciousness: Religious i epistemologic implications, In: V. Jerotić, M. Arsenijević, P. Grujić, D. Raković (eds.), *Religion and Epistemology* (Dereta, Belgrade, 2007), in Serbian.
- 16. D. Raković, M. Dugić, Quantum-holographic and classical Hopfield-like associative nnets: Implications for modeling two cognitive modes of consciousness, *Opticheskii J.* 72(5) (2005) 13-18 (*Special Issue on Topical Meeting on Optoinformatics 'Optics Meets Optika'*, Saint-Petersburg, 2004).
- 17. D. Raković, Scientific bases of quantum-holographic paradigm, in: I. Kononenko (ed.), *Proc. Int. Conf. Measuring Energy Fields*, Kamnik, Slovenia, 2007, Invited lecture.
- 18. D. Raković, S. Arandjelović, M. Mićović (eds.), *Proc. Symp. Quantum-Informational Medicine QIM 2011: Acupuncture-Based and Consciousness-Based Holistic Approaches & Techniques* (QUANTTES & HF & DRF, Belgrade, 2011); http://www.qim2011.org
- 19. D. Raković, Dj. Koruga (eds.), *Consciousness: Scientific Challenge of the 21st Century*, (ECPD, Belgrade, 1995; 1996).
- 20. Lj. Rakić, G. Kostopoulos, D. Raković, Dj. Koruga (eds.), *Brain and Consciousness*, Proc. ECPD Workshop & Symposium (ECPD, Belgrade, 1997).
- 21. V. Jerotić, Dj. Koruga, D. Raković (eds.), *Science Religion Society* (Orthodox Theological Faculty SPC & Ministry of Religions of Republic of Serbia, Belgrade, 2002), in Serbian.

- 22. S. Hameroff (ed.), *Toward a Science of Consciousness*, Series of Tucson Conferences, 1994-.
- 23. S. R. Hameroff, Quantum coherence in microtubules: a neural basis for emergent consciousness?, *J. Consciousn. Stud.* 1 (1994) 91-118.
- 24. R. Penrose, *Shadows of the Mind: A Search for the Missing Science of Consciousness* (Oxford Univ. Press, Oxford, England, 1994).
- 25. J. von Neumann, *Mathematical Foundations of Quantum Mechanics* (Princeton Univ. Press, Princeton, 1955).
- 26. H. Stapp, Mind, Matter, and Quantum Mechanics (Springer, New York & Berlin, 1993).
- 27. A. Shimony, in: R. Penrose, A. Shimony, N. Cartwright, S. Hawking (eds.), *The Large, the Small and the Human Mind* (Cambridge Univ., Cambridge, 1995).
- 28. M. Jibu, K. H. Pribram, K. Yasue, From conscious experience to memory starage and retreival: The role of quantum brain dynamics and boson condensation of evenescent photons, *Int. J. Modern Physics B* 10(13-14) (1996) 1735-1754.
- 29. C. Tart (ed.), *Altered States of Consciousness* (Academic, New York, 1972); C. Tart (ed.), *Transpersonal Psychologies*, 2nd ed. (Harper, San Francisco, 1992).
- 30. R. E. Ornstein, *The Psychology of Consciousness* (Harcourt Brace, New York, 1972).
- 31. M. Tegmark, Importance of quantum decoherence in brain processes, *Phys. Rev. E* 61 (2000) 4194-4206.
- 32. K. Wilber, *The Atman Project* (Quest, Wheaton, IL, 1980).
- 33. S. Grof, C. Grof, *Holotropic Breathwork: A New Approach to Self-Exploration and Therapy, Series in Transpersonal and Humanistic Psychology* (Sunny Press, Albany, 2010).
- 34. S. Milenković, *Values of Contemporary Psychotherapy* (Narodna knjiga Alfa, Belgrade, 1997), in Serbian.
- 35. V. Jerotić, *Individuation and (or) Deification* (Ars Libri, Belgrade & National and University Library, Priština, 1998), in Serbian.
- 36. N. Berdyaev, *Philosophy of Freedom* (Logos Ant, Belgrade, 1996), Serbian translation from Russian.
- 37. D. Bohm, Wholeness and the Implicate Order (Routledge & Kegan Paul, London, 1980).
- 38. K. Pribram, Languages of the Brain: Experimental Paradoxes and Principles in Neuropsychology (Brandon, New York, 1971).
- 39. K. R. Popper, J. C. Eccles, *The Self and Its Brain* (Springer, Berlin, 1977), Chs. E2,3.
- 40. B. J. Baars, *A Cognitive Theory of Consciousness* (Cambridge Univ., Cambridge, MA, 1988).
- 41. F. Crick, *The Astonishing Hypothesis: The Scientific Search for the Soul* (Charles Scribner's Sons, New York, 1994).
- 42. R. G. Jahn, B. J. Dunne, *Consciousness and the Source of Reality: The PEAR Odyssey* (ICRL, Princeton, 2011); and many PEAR (Princeton Engineering Anomalies Research) archive publications and technical communications www.princeton.edu/~pear.
- 43. P. van Lommel, R. van Wees, V. Meyers, I. Elfferich, Near-death experience in survivors of cardiac arrest: Prospective study in the Netherlands, *The Lancet* 358 (2001) 2039-2045.
- 44. A. Liptay-Wagner, Differential diagnosis of the near-death experience: Which illness cannot be considered as NDE?, *Proc. 6th Int. Multi-Conf. Information Society IS'2003*, *Mind-Body Studies* (Information Society, Ljubljana, 2003).
- 45. R. A. Moody, jr., *Life After Life: The Investigation of a Phenomenon Survival of Bodily Death* (Harper, San Francisco, 2001).
- 46. W. Evans Wentz, *The Tibetan Book of the Dead* (Oxford Univ., London, 1968).

- 47. R. Targ, H. Puthoff, *Mind-Reach: Scientific Look at Psychic Ability* (Delacorte, New York, 1977).
- 48. V. P. Kaznacheev, A. V. Trofimov, *Cosmic Consciousness of Humanity* (Elendis-Progress, Tomsk, 1992).
- 49. M. A. Persinger, E. W. Tsang, J. N. Booth, S. A. Koren, Enhanced power within a predicted narrow band of theta activity during stimulation of another by circum-cerebral weak magnetic fields after weekly spatial proximity: Evidence for macroscopic quantum entanglement?, *NeuroQuantology* 6(1) (2008) 7-21.
- 50. J. S. Hagelin, Is consciousness the unified field? A field theorist's perspective, *Modern Sci. & Vedic Sci.* 1 (1987) 29-87.
- 51. F. Capra, *The Tao of Physics: An Explanation of the Parallels Between Modern Physics and Eastern Mysticism* (Flamengo, London, 1991).
- 52. D. Zohar, *The Quantum Self* (Flamingo, London, 1991).
- 53. E. Laszlo, *The Interconnected Universe Conceptual Foundations of Transdisciplinary Unified Theory* (World Scientific, Singapore, 1995).
- 54. B. Rubik, *Life at the Edge of Science* (Institute for Frontier Science, Oakland, CA, 1996).
- 55. S. Ostrander, L. Schroeder, *Psychic Discoveries* (Marlowe, New York, 1997).
- 56. D. Radin, *Entangled Minds: Extrasensory Experiences in a Quantum Reality* (Paraview, New York, 2006).
- 57. L. McTaggart, The Field: The Quest for the Secret Force of the Universe (HarperCollins, London, 2001); L. McTaggart, The Intention Experiment: Using Your Thoughts to Change Your Life and the World (Free Press, New York, 2007).
- 58. P. Vujičin, States of consciousness in esoteric practice, in: D. Raković, Dj. Koruga (eds.), *Consciousness: Scientific Challenge of the 21st Century* (ECPD, Belgrade, 1995), and refs therein.
- 59. Swami Prabhavananda, Ch. Isherwood (tr.), *The Yoga Sutras of Patanjali. How to Know God* (New American Library, New York, 1969).
- 60. H. Johari, Breath, Mind, and Consciousness (Destiny Books, Rochester, 1989).
- 61. Swami Sada Shiva Tirtha, *The Ayurveda Encyclopedia. Natural Secrets of Healing, Prevention and Longevity*, 2nd ed. (Sat Yuga Press, New York, 2007); Master Choa Kok Sui, *The Origin of Modern Pranic Healing and Arhatic Yoga* (Institute for Inner Studies Publishing Foundation Inc, 2006).
- 62. Mantak Chia, *Awaken Healing Energy Through The Tao* (Aurora Press, Santa Fe, 1983); Yuan Tze, *Voyage to the Shore: An Invitation to Enhance Your Health and Develop Your Life, Parts 1, 2, 3* (Yuan Tze Centre, Wellington, New Zealand, 2008, 2010, 2011).
- 63. D. Davitashvili, *Listen to my Hands* (Izida, Belgrade, 1988), Serbian translation from Russian.
- 64. B. A. Brennan, *Hands of Light: A Guide to Healing Through the Human Energy Field* (Bantam, New York, 1987).
- 65. D. W. Orme-Johnson, J. T. Farrow (eds.), *Scientific Research on Transcendental Meditation Program*, Collected papers Vol. 1 (MERU Press, Rheinweiler, W. Germany, 1977).
- 66. S. Petrović, *Tibetan Medicine* (Narodna knjiga Alfa, Belgrade, 2000), in Serbian.
- 67. http://en.wikipedia.org/wiki/Soul; https://en.wikipedia.org/wiki/Spirit.
- 68. https://en.wikipedia.org/wiki/Oi
- 69. M. Milenković, *Reiki The Road to Self*, 2nd ed. (Booking, Belgrade, 2010), in Serbian.
- 70. E. Pearl, The Reconnection: Heal Others, Heal Yourself (Hay House, Carlsbad, 2001).
- 71. V. Stibal, *Theta Healing: Go Up and Seek God, Go Up and Work with God* (THInK, Idaho Falls, 2006).

- 72. G. Grabovoi, S. Smirnova, S. Jelezky, *Methods of Healing through the Application of Consciousness* (Rare Ware Medienverlag, Hamburg, 2012).
- 73. R. Bartlett, *Matrix Energetics: The Science and Art of Transformation* (Beyond Words Publ., Hillsboro, 2009).
- 74. F. J. Kinslow, *The Secret of Instant Healing* (Hay House, Carlsbad, 2008).
- 75. S. Simonovska, Quantum transformation, in: D. Raković, S. Arandjelović, M. Mićović (eds.), *Proc. Symp. Quantum-Informational Medicine QIM 2011: Acupuncture-Based & Consciousness-Based Holistic Approaches & Techniques* (QUANTTES & HF & DRF, Belgrade, 2011).
- 76. B. Hellinger, G. ten Hevel, *Acknowledging what is: Conversations with Bert Hellinger* (Zeig, Tucker & Theisen, Phoenix, AZ, 1999).
- 77. J. Szentagothai, Downward causation?, Ann. Rev. Neurosci. 7 (1984) 1-11.
- 78. E. R. Kandel, A new intellectual framework for psychiatry, *Am. J. Psychiatry* 155 (1998) 457-469.
- 79. M. Rakočević, The universal consciousness and the universal code, in: D. Raković, Dj. Koruga (eds.), *Consciousness: Scientific Challenge of the 21st Century* (ECPD, Belgrade, 1995).
- 80. Dj. Koruga, Information physics: In search of a scientific basis of consciousness, in: D. Raković, Dj. Koruga (eds.), *Consciousness: Scientific Challenge of the 21st Century* (ECPD: Belgrade, 1995).
- 81. L. Susskind, J. Lindesay, *An Introduction to Black Holes, Information and the String Theory Revolution: The Holographic Universe* (World Scientific, Singapore, 2005); J. D. Bekenstein, Information in the holographic universe, *Scientific American* 289(2) (2003) 58-65; Y. J. Ng, From computation to black holes and space-time foam, *Phys. Rev. Lett.* 86 (2001) 2946-2949.
- 82. M. Talbot, *The Holographic Universe* (HarperCollins, New York, 1991).
- 83. Y. Zhang, ECIWO Biology and Medicine: A New Theory of Conquering Cancer and Completely New Acupuncture Therapy (Neimenggu People Press, Beijing, 1987).
- 84. P. P. Gariaev, *Linguistic-Wave Genome: Theory and Practice* (Institute of Quantum Genetics, Kiev, 2009), in Russian.
- 85. D. Raković, On nature and control of creativity Tesla as a case study, in: D. Karabeg, J. Park (eds.), *Proc. 2nd Int. Workshop on Knowledge Federation*, Dubrovnik, Croatia, 2010, CEUR-WS.org/Vol-822, 2011, http://ceur-ws.org/Vol-822
- 86. F. Holmes, *The Life of Mozart Including his Correspondence* (Chapman & Hall, 1878) 211.
- 87. M. Newton, Journey of Souls (Llewellyn, Woodbury, 1994).
- 88. M. Eliade, H. S. Wiesner, I. P. Couliano, *The Eliade Guide to World Religions* (Harper, San Francisco, 1991).
- 89. M. Tomšić Akengen, Abiku phenomenon: Spiritual origin and treatment of self-destructiveness, in: D. Raković, S. Arandjelović, M. Mićović (eds.), *Proc. Symp. Quantum-Informational Medicine QIM 2011: Acupuncture-Based and Consciousness-Based Holistic Approaches & Techniques* (QUANTTES & HF & DRF, Belgrade, 2011).
- 90. Č. Hadži-Nikolić, Entheogenic shamanism: Anthropological category, transpersonal dimension or psychotherapeutic model, in: D. Raković, S. Arandjelović, M. Mićović (eds.), *Proc. Symp. Quantum-Informational Medicine QIM 2011: Acupuncture-Based and Consciousness-Based Holistic Approaches & Techniques* (QUANTTES & HF & DRF, Belgrade, 2011).
- 91. B. J. Øverbye, The divided self as understood by shaman natural healers! An effort of transcultural research to understand altered states of mind, *Med. Data Rev.* 1(3) (2009) 69-76.

- 92. C. Castaneda, *A Separate Reality: Further Conversations with Don Juan* (Simon & Schuster, New York, 1971).
- 93. Paramahansa Yogananda, *Autobiography of a Yogi* (The Philosophical Library, New York, 1946).
- 94. Swami Rama, *Living with the Himalayan Masters* (The Himalayan Institute Press, New York, 1978).
- 95. D. Chopra, Quantum Healing: Exploring the Frontiers of Mind / Body Medicine (Bantam, New York, 1989).
- 96. J. Vlahos, *Orthodox Psychotherapy: The Holy Fathers Science* (Missionary School of St. Alexander Nevskiy Church, Belgrade, 1998), Serbian transl from Greek.
- 97. K. C. Markides, Fire in the Heart. Healers, Sages and Mystics (Paragon, New York, 1990).
- 98. L. Dossey, *Healing Words: The Power of Prayer and the Practice of Medicine* (Harper, San Francisco, 1993).
- 99. J. Vitale, I. Hew Len, Zero Limits: The Secret Hawaiian System for Wealth, Health, Peace, and More (Wiley, Hoboken, 2007).
- 100. L. L. Hay, You Can Heal Your Life (Hay House, Carlsbad, 1984).
- 101. A. Moorjani, *Dying To Be Me: My Journey from Cancer, to Near Death, to True Healing* (Hay House, Carlsbad, 2012).
- 102. W. S. Harris, M. Gowda, J. W. Kolb, C. P. Strychacz, J. L. Vacek, P. G. Jones, A. Forker, J. H. O'Keefe, B. D. McCallister, A randomized, controlled trial of the effects of remote, intercessory prayer on outcomes in patients admitted to the coronary care unit, *Arch. Intern. Med.*159 (1999) 2273-2278.
- 103. B. Bedričić, M. Stokić, Z. Milosavljević, D. Milovanović, M. Ostojić, D. Raković, M. Sovilj, S. Maksimović, Psycho-physiological correlates of non-verbal transpersonal holistic psychosomatic communication, in: S. Jovičić, M. Subotić (eds.), Verbal Communication Quality Interdisciplinary Research I (LAAC & IEPSP, Belgrade, 2011).
- 104. R. J. Callahan, J. Callahan, *Thought Field Therapy and Trauma: Treatment and Theory* (Indian Wells, 1996).
- 105. Ž. Mihajlović Slavinski, *PEAT and Neutralization of Primeval Polarities* (Belgrade, 2000).
- 106. W. Fishman, M. Grinims, Muscle Response Test (Richard Marek, New York, 1979).
- 107. D. Raković, Towards a new/old humanism: Transitional states of consciousness as a clue?, in: Lj. Rakić, G. Kostopoulos, D. Raković, Dj. Koruga (eds.), *Proc. Symp. Brain and Consciousness* (ECPD, Belgrade, 1997).
- 108. D. P. Kreculj, J. P. Marić, 'World risk society' and globostres, in: V. Jerotić, Dj. Koruga, D. Raković (eds.), *Science Religion Society* (Orthodox Theological Faculty SPC & Ministry of Religions of Republic of Serbia, Belgrade, 2002), in Serbian; U. Beck, *The Global Risk Society* (Sage Publ., London, 1999).
- 109. V. Uskoković, *Towards Reductionist-Holistic Balance of Modern Science and Society* (Akademska misao, Belgrade, 2004), in Serbian; V. Uskoković, *Principles of Holistic Science Future* (ICNT, Belgrade, 2006), in Serbian.
- 110. M. Peruš, Neuro-quantum parallelism in mind-brain and computers, *Informatica* 20 (1996) 173-183.
- 111. T. Kohonen, Self-Organization and Associative Memory (Springer, Berlin, 1984).
- 112. D. Amit, *Modeling Brain Functions: The World of Attractor Neural Nets* (Cambridge Univ., Cambridge, 1989).
- 113. H. Haken, Synergetic Computers and Cognition, A top-Down Approach to Neural Nets (Springer, Berlin, 1991).

- 114. D. Giulini, E. Joos, C. Kiefer, J. Kupsch, I. -O. Stamatescu, H. D. Zeh, *Decoherence and the Appearance of a Classical World in Quantum Theory* (Springer, Berlin, 1996).
- 115. M. Dugić, *Decoherence in Classical Limit of Quantum Mechanics*, SFIN XVII(2), Institute of Physics, Belgrade, 2004, in Serbian.
- 116. N. D. Devyatkov, O. Betskii (eds.), *Biological Aspects of Low Intensity Millimetre Waves* (Seven Plus, Moscow, 1994).
- 117. S. P. Sit'ko, L. N. Mkrtchian, Introduction to Quantum Medicine (Pattern, Kiev, 1994).
- 118. Yu. P. Potehina, Y. A. Tkachenko, A. M. Kozhemyakin, *Report on Clinical Evaluation for Apparatus EHF-IR Therapies Portable with Changeable Oscillators CEM TECH* (CEM Corp, Nizhniy Novgorod, 2008).
- 119. Z. Jovanović-Ignjatić, Quantum-Holographic Medicine: Via Acupuncture and Microwave-resonance (Self) Regulatory Mechanisms (Quanttes, Belgrade, 2010), in Serbian
- 120. Z. Jovanović-Ignjatić, D. Raković, A review of current research in microwave resonance therapy: Novel opportunities in medical treatment, *Acup. & Electro-Therap. Res., The Int. J.* 24 (1999) 105-125.
- 121. D. Raković, Z. Jovanović-Ignjatić, D. Radenović, M. Tomašević, E. Jovanov, V. Radivojević, Ž. Martinović, P. Šuković, M. Car, L. Škarić, An overview of microwave resonance therapy and EEG correlates of microwave resonance relaxation and other consciousness altering techniques, *Electro- and Magnetobiology* 19 (2000) 193-220 (also presented at *10th Int. Montreux Congress on Stress*, Montreux, 1999).
- 122. http://www.energy-medicine.info; Inergetix website with contemporary critical review of technologies in the wider field of quantum-informational medicine, including information on Rife's early research in the field of bioresonance medicine in 1930s, which was not recognized at that time.
- 123. M. Yu. Gotovskiy, Yu. F. Perov, L. V. Chernecova, *Bioresonance Therapy* (IMEDIS, Moscow, 2010).
- 124. A. V. Samohin, Y. V. Gotovski, *Electroacupuncture Diagnostics and Treatment by the Method of R. Voll*, 5th ed. (IMEDIS, Moskva, 2007), in Russian.
- 125. R. Voll, Twenty years of electroacupuncture diagnosis in Germany. A progress report, *Am. J Acup.* 3(1) (1975) 7-17.
- 126. C. Xinong (ed.), *Chinese Acupuncture and Moxibustion* (Foreign Languages Press, Beijing, 1987).
- 127. Y. Omura, Acupuncture Medicine: Its Historical and Clinical Background (Japan Publ. Inc., Tokyo, 1982).
- 128. F. G. Portnov, *Electropuncture Reflextherapy* (Zinatne, Riga, 1982), in Russian.
- 129. A. I. Škokljev et al, *Acupuncturology* (ECPD, Belgrade), 2011, in Serbian.
- 130. D. Djordjević, *Influence of Magnetic Fields on Mechanisms of Neurohumoral Regulation*, PhD Thesis (Faculty of Medicine, Belgrade, 2008), in Serbian.
- 131. A. Krstić, Homeopathy and Health. Handbook of Self-Aid and Mutual-Aid in the Treatment of People (Mol, Belgrade, 2000), in Serbian; B. Todorović, Scientific Bases of Homeopathy: Bioinformatics and Nanopharmacology (Prometej, Novi Sad, 2005), in Serbian.
- 132. S. C. F. Hahnemann, *Organon der Rationellen Heilkunde* (Dresden, 1810); B. Bellavite, A. Signorini, *The Emerging Science of Homeopathy: Complexity, Biodynamics and Nanopharmacology* (North Atlantic Books, Berkeley CA, 2002).
- 133. L. Montagnier, J. Aissa, E. Del Giudice, C. Lavallee, A. Tedeschi, G. Vitiello, DNA waves and water, <u>arXiv:1012.5166v1</u> [q-bio.OT].
- 134. It should be emphasized that many transpersonal phenomena related to *consciousness* and psychosomatic bioenergy-correction are phenomenologically well documented, and

that their physical explanation should be sought on the very border of the current scientific paradigm. In the framework of our plausibly generalized quantum-holographic / quantum-gravitational theoretical framework of consciousness and psychosomatics they are of quantum-gravitational nature in the space-time transcending highlynoninertial transitional states of consciousness [8,10-15,17] (from high-dielectric bodily into low-dielectric out-of-body states!) equivalent-to-strong-gravitation (according to very general Einstein's Principle of equivalence of inertial and gravitational accelerations!) manifested by locally generated "wormhole" space-time tunnels (stabilized by so called *exotic matter* (vacuum fluctuations in strongly curved space-time of "wormhole" tunnels [135]) with anti-gravity effects - indeed observed in transpersonal psychokinetic manifestations of vital energy [11,42,58-60,82,93,94], http://www.youtube.com/watch?v=faUJAgvvV c). The same theoretical framework also suggests a physical basis for ad hoc von Neumann's projection postulate (on microquantum scale), to explain the quantum-mechanical wave function collapse (via local quantum-gravitationally-induced "wormhole" tunnels in highly-noninertial quantummeasurement-like situations equivalent-to-strong-gravitation (in accordance with Einstein's *Principle of equivalence!*); the question of how it is possible that these highlynoninertial microparticle processes with inevitable opening of miniature "wormhole" tunnels were not taken into account within quantum mechanics which is nevertheless extremely accurate theory(?) - can be answered as they were(!) but implicitly in the framework of von Neumann's projection postulate (which is on the deeper quantumgravitational-level!) [8,10-15,17].

135. S. Thorne, *Black Holes and Time Warps: Einstein's Outrageous Legacy* (Picador, London, 1994).